

Title (en)
MULTI-PATH, SERIES-SWITCHED, PASSIVELY-SUMMED DIGITAL-TO-ANALOG CONVERTER

Title (de)
MEHRWEG-, SERIELL GESCHALTETER, PASSIV ADDIERTER DIGITAL-ANALOG-WANDLER

Title (fr)
CONVERTISSEUR NUMÉRIQUE-ANALOGIQUE À SOMMATION PASSIVE, COMMUTÉ EN SÉRIE ET À TRAJETS MULTIPLES

Publication
EP 3248291 A4 20180829 (EN)

Application
EP 16740716 A 20160121

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- US 201562106219 P 20150122
- US 201562188884 P 20150706
- US 201562199955 P 20150731
- US 201514935363 A 20151106
- US 2016014199 W 20160121

Abstract (en)
[origin: WO2016118674A1] A digital-to-analog converter which minimizes noise and optimizes dynamic range by apportioning a least significant bits portion of an incoming digital signal to a low-path circuit and a most significant bits portion of the incoming digital signal to a high-path circuit. The low-path circuit has a low-path digital-to-analog converter, which feeds a low-path amplifier, which feeds a low-path resistive element, which feeds an output node. The high-path circuit has a high-path digital-to-analog converter, which feeds a high-path amplifier, which feeds a high-path resistive element when a high-path switching element is closed, which feeds an output node. The output node is a simple electrical connection of the outputs of the low-path and high-path resistive elements. The high-path switching element is closed when the incoming digital signal has an amplitude above a switching threshold level. Parameters of the circuit, including the sizes of the least significant bits portion and most significant bits portion of the incoming digital signal, are selected such that the switching threshold level is significantly above the noise level produced by the high-path circuit thereby providing psychoacoustic masking of noise produced by the high-path circuit.

IPC 8 full level
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CPC (source: EP)
H03M 1/08 (2013.01); **H03M 1/68** (2013.01); **H03M 1/70** (2013.01)

Citation (search report)

- [I] US 6353404 B1 20020305 - KUROIWA KIYOTO [JP]
- [A] US 5148169 A 19920915 - BUSTANCE C DAVID [GB], et al
- [A] US 6549155 B1 20030415 - HEMINGER MARK DAVID [US], et al
- See references of WO 2016118674A1

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Designated contracting state (EPC)
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